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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,840	12/05/2005	Christoph Porschmann	0112740-1068	4335
29177 7590 03/22/2007 BELL, BOYD & LLOYD, LLP P.O. BOX 1135 CHICAGO, IL 60690			EXAMINER LEE, PING	
			ART UNIT	PAPER NUMBER
			2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,840	<b>Applicant(s)</b> PORSCHMANN, CHRISTOPH	
	<b>Examiner</b> Ping Lee	<b>Art Unit</b> 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath (US007092542B2).

Regarding claims 10, 14 and 15, McGrath discloses a method of simulating a movement in a predetermined direction relative to a reference point in the surrounds of an acoustic reproduction device (33, 34) to produce at least two virtual sound sources (col. 3, lines 2-3; col. 4, lines 18-20) with a control unit controls the repeated movement of the at least two virtual sound sources in succession from a predetermined starting point to a predetermined ending point. Although Figs. 3 and 6 only show a single virtual source, the McGrath's control system is used to simulate multiple moving sound sources (col. 3, lines 2-3; col. 4, lines 18-20); therefore, the claimed limitation "at least two virtual sound sources" is met.

The claimed limitation that the virtual source is back again to the starting point was not explicitly shown in McGrath. However, applicant fails to define the purpose of having the virtual sound source return back to the starting point. Furthermore, McGrath teaches how to generate simulated virtual sound sources from one location to another. One skilled in the art would have recognized that the specific (such as moving back to the starting point) of a simulated sound travel path was a matter of design choice to fit an application. If the application requires the virtual sound source to be returned to the

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starting point, McGrath's control unit could be programmed to perform such function.

Thus, it would have been obvious to one of ordinary skill in the art to modify McGrath's system by programming the control unit to having the simulated virtual sound sources to be traveled in a specific path, including returning to the starting point, in order to perform simulation based on the required application.

Regarding claims 11 and 17, the claimed reference point could read on 31 in Fig. 3 or 40 in Fig. 6.

Regarding claims 12 and 18, as shown in Fig. 7, McGrath shows the increase intensity and decrease intensity.

Regarding claim 13, McGrath teaches the constant speed (col. 4, line 25).

Regarding claim 16, McGrath teaches the location data (col. 4, lines 50-60).

### ***Response to Arguments***

3. Applicant's arguments filed 1/3/07 have been fully considered but they are not persuasive.

Applicant argued on p. 6 that McGrath fails to teach or suggest the features of simulating a movement in a predetermined direction relative to a reference point in the surroundings of an acoustic reproduction device. On P. 7, applicant further argued that McGrath's system is intended to give different acoustic properties to listeners situated in different locations.

Examiner disagreed. Fig. 3 of McGrath is being used for illustration purpose. The system would work equally well with one listener (for example, 31) sitting perfectly

in the middle of the two speakers, or multiple listeners. McGrath's system is also designed for a listener (for example 30 or 32), who is not located midway between the two speakers (33,34), so all listeners would experience the movement of the sound source realistically. If applicant want "the specific reference point" to be identified, it would be 31 as shown in Fig. 3. At the reference point 31, as shown in Fig. 3, the listener would experience the simulated movement of the source (35) moving from the left to the right with respect to his/her reference location.

Applicant argued that McGrath only teaches using a singular sound source, not the claimed "at least two virtual sound sources".

Applicant's argument is based solely on the two examples provided as shown in Figs. 3 and 6. However, in view of the complete disclosure, one skilled in the art would have recognized that the embodiment as shown Fig. 3 or 6 is for illustration only and is used to explain the concept in its simplest form. McGrath clearly and specifically disclose and suggest that the system could be used "for the simulation of moving sound sources" (col. 3, lines 2-3) and "providing for a more linear response to moving sound sources" (col. 4, lines 19-20). Therefore, McGrath teaches the claimed invention.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

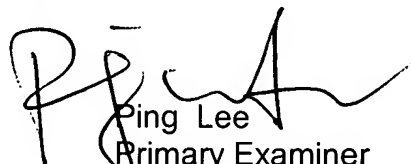
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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Ping Lee  
Primary Examiner  
Art Unit 2615

pwl